

U.S.C.G. Merchant Marine Exam  
Master of Unlimited Tonnage  
Q303 Deck Safety  
(Sample Examination)

**Choose the best answer to the following Multiple-Choice Questions.**

1. What is the function of an air receiver in the compressed air system?

- A. Utilized to store compressed air
- B. Purifies the air
- C. Provides overpressure protection
- D. Condenses moisture

Correct answer: A

2. Which term indicates how many tons of cargo a vessel can carry?

- A. Gross tonnage
- B. Loaded displacement
- C. Deadweight
- D. Bale cubic

Correct answer: C

3. Stability is determined principally by the location of the point of application of two forces: the downward-acting gravity force and which other force?

- A. The downward-acting weight force
- B. The upward-acting weight force
- C. The upward-acting buoyant force
- D. The environmental force

Correct answer: C

4. A partially full tank causes a virtual rise in the height of the \_\_\_\_\_.

- A. center of buoyancy
- B. center of flotation
- C. metacenter
- D. center of gravity

Correct answer: D

5. Radiation spreads a fire by \_\_\_\_\_.

- A. burning liquids flowing into another space
- B. heated gases flowing through ventilation systems
- C. transferring heat across an unobstructed space
- D. transmitting the heat of a fire through the ship's metal

Correct answer: C

6. When a vessel signals its distress by means of a gun or other explosive signal, the firing should be at approximately which time intervals?
- A. 10 minutes
  - B. 1 hour
  - C. 1 minute
  - D. 3 minutes

Correct answer: C

7. Your stability calculations indicate your vessel has a marginal GM. Which of the following is the most effective way to increase the stability of the vessel?
- A. Raise the center of buoyancy and reduce freeboard
  - B. Lower the center of buoyancy and raise the center of gravity
  - C. Lower the center of gravity and raise reserve buoyancy
  - D. Raise the center of gravity and raise the center of buoyancy

Correct answer: C

8. A fire starting by spontaneous combustion can be expected in which condition?
- A. Clean mattresses are stored in contact with an electric light bulb.
  - B. Paints, varnish, or other liquid flammables are stowed in a dry stores locker.
  - C. Oily rags are stowed in a metal pail.
  - D. Inert cargoes such as pig iron are loaded in a wet condition.

Correct answer: C

9. What is the usual depth of a beam bracket?
- A. 5 times the depth of the beam
  - B. 2 1/2 times the depth of the beam
  - C. 10 times the depth of the beam
  - D. same depth as the beam

Correct answer: B

10. Which extinguishing agent is most effective for combating wood fires?
- A. Dry chemical
  - B. Water
  - C. Carbon dioxide
  - D. Dry powder

Correct answer: B

11. What condition will result in the automatic shutdown of a diesel engine?
- A. Excessive turbo charger speed
  - B. Low lube oil pressure
  - C. High jacket water pressure
  - D. High lube oil pressure

Correct answer: B

12. If you must enter water on which there is an oil fire, you should \_\_\_\_\_.

- A. wear very light clothing
- B. keep both hands in front of your face to break the water surface when diving headfirst
- C. enter the water on the windward side of the vessel
- D. protect your life preserver by holding it above your head

Correct answer: C

13. An aircraft has indicated that he wants you to change course and follow him. You cannot comply because of an emergency on board. Which signal should you make?

- A. Send the Morse signal "N" by flashing light
- B. Make an "S" turn (hard right then hard left) and resume course
- C. Fire a red flare at night or a red smoke signal by day
- D. Make a round turn (360°) and resume course

Correct answer: A

14. During a SAR helicopter evacuation which of the following describes the proper donning of a rescue sling?

- A. The person steps onto the sling grasping the hoist line for support while facing away from the winch hook
- B. The person sits in the sling with their hands clasped across the chest while facing the winch hook
- C. The loop of the sling passes behind the back and under the arms while facing the winch hook
- D. The loop of the sling passes across the chest and under the arms while facing away from the winch hook

Correct answer: C

15. Where would the number 3 lifeboat be located?

- A. Behind boat number 1 on the starboard side
- B. Behind boat number 1 on the port side
- C. Behind boat number 2 on the port side
- D. The forward boat on the starboard side

Correct answer: A

16. What is the penalty for failure to enforce, or comply with, the vessel bridge-to-bridge radiotelephone regulations?

- A. Civil penalty against the Master or person in charge
- B. \$1,000 fine or imprisonment for not more than two years
- C. \$5,000 fine and imprisonment for not more than one year, or both
- D. Civil penalty of no more than \$5,000

Correct answer: A

17. What can an oxygen indicator be used to determine?

- A. If there is sufficient oxygen in a compartment to support life
- B. If combustible gases present
- C. If hydrogen gas present
- D. All of the above

Correct answer: A

- 18.** One of your crew members falls overboard from the starboard side. You should IMMEDIATELY take which action?
- A. Position your vessel to windward and begin recovery
  - B. Apply left rudder
  - C. Begin backing your engines
  - D. Throw the crewmember a life preserver

Correct answer: D

- 19.** What is the breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliance?
- A. 300 lbs
  - B. 500 lbs
  - C. 1000 lbs
  - D. 1500 lbs

Correct answer: B

- 20.** During a SAR helicopter evolution the rescue sling is the most widely used method of extraction. Which of the following describes the alternate Double Lift Method used to pick up incapacitated persons?
- A. Two normal rescue slings one manned by a helicopter crew member
  - B. A normal rescue sling and a rescue net used to simultaneously extract multiple personnel
  - C. A normal rescue sling and a rescue seat used to simultaneously extract multiple personnel
  - D. A normal rescue sling and a seating belt manned by a helicopter crew member

Correct answer: D

- 21.** What does blowing tubes accomplish?
- A. Cleans soot deposits from the inside of the stack
  - B. Increases boiler efficiency
  - C. Eliminates unburned fuel oil residues from the firebox
  - D. Flushes away mineral deposits inside the water tubes

Correct answer: B

- 22.** Which is TRUE of the mechanical gearing of deck machinery such as the windlass or towing engines?
- A. They should be painted a contrasting color from the base color in order to call attention to the gearing
  - B. They should have a guard over the gearing
  - C. They should be open to view so, if a foreign object gets in the gearing, the operator can immediately stop the machinery
  - D. They should not be operated if there is any crew within 10 feet of the machinery

Correct answer: B

**23.** Your ship is sinking rapidly. A container containing an inflatable liferaft has bobbed to the surface upon functioning of the hydrostatic release. Which action should you take?

- A. Manually open the container and inflate the liferaft with the hand pump.
- B. Cut the painter line so it will not pull the liferaft container down.
- C. Take no action because the painter will cause the liferaft to inflate and open the container.
- D. Swim away from the container so you will not be in danger as it goes down.

Correct answer: C

**24.** What is the purpose of rigging frapping lines on lifeboat falls?

- A. To give the occupants a safety line when the boat is being lowered from the embarkation level
- B. To bring the lifeboat close alongside the rail in the embarkation position in order for passengers and crew to board
- C. To secure the lifeboat in the davits when in the stowed position
- D. To reduce the violent swing of the lifeboat at the embarkation level when the tricing pendants are released

Correct answer: D

**25.** As seen in illustration D004SA below, what action must be taken before inserting a low-velocity fog applicator into an all-purpose nozzle?

- A. Move the handle to position 2
- B. Move the handle to position 1
- C. Remove the high-velocity nozzle tip
- D. Install the high-velocity nozzle tip

Correct answer: C

**26.** You have taken another vessel in tow. Which is an indicator that the towing speed is too fast?

- A. The towed vessel goes "in irons"
- B. The catenary comes clear of the water
- C. The tow line feels like it is "jumping" when touched
- D. The vessels are not in step

Correct answer: B

**27.** Which type of weld testing can be used to detect internal flaws?

- A. Radiographic
- B. Chemical reaction
- C. Dye penetrant
- D. Magnetic particle

Correct answer: A

**28.** What is the average range of vessel-to-vessel VHF-FM radio communications?

- A. 15 to 20 miles
- B. 60 to 90 miles
- C. 90 to 120 miles
- D. 120 to 150 miles

Correct answer: A

**29.** What is the minimum number of deck officers, able seaman or certificated persons required to command each lifeboat on a vessel in ocean service?

- A. Two
- B. Three
- C. Four
- D. Five

Correct answer: A

**30.** What term indicates the immersed body of the vessel aft of the parallel mid-body?

- A. Counter
- B. Run
- C. Stern
- D. Flow

Correct answer: B

**31.** How can you prevent the spread of fire by conduction?

- A. Close all openings to the area
- B. Shut off all electric power
- C. Cool the bulkheads around the fire
- D. Remove combustibles from direct exposure

Correct answer: C

**32.** A burning pile of dunnage would be which classification of fire?

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Correct answer: A

**33.** Which is TRUE of the term negative slip on a vessel?

- A. The distance a vessel travels when all propulsion has been stopped
- B. The distance a vessel travels in the same direction when rudder has been applied
- C. The ship is moving slower than the theoretical propeller speed
- D. The ship is moving faster than the theoretical propeller speed

Correct answer: D

**34.** What is the objective of shoring a damaged bulkhead?

- A. To support and hold the area in the damaged position
- B. To withstand subsequent additional damage
- C. To force the warped, bulged, or deformed sections back into place
- D. To make a watertight seal at the damaged area

Correct answer: A

**35.** Normally, where is the potable water systems directly connected to?

- A. The feed-water system
- B. The potable water tank
- C. The vessel's fire-main system
- D. A freshwater sanitary system

Correct answer: B

**36.** Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to \_\_\_\_\_.

- A. establish flooding boundaries and prevent further spread of flood water
- B. plug the hole(s) in the outer shell
- C. pump out the water inside the vessel
- D. calculate the free surface effect and lost buoyancy to determine the vessel's stability

Correct answer: A

**37.** What is the purpose of the tricing pendants?

- A. They provide suspensions for the manropes
- B. They hold a lifeboat next to the embarkation deck while loading
- C. They control the fore and aft motion of a lifeboat during lowering
- D. They control the outboard swing of a lifeboat during lowering

Correct answer: B

**38.** An inflatable liferaft is thrown into the water from a sinking vessel. What should occur after the painter trips the CO2 bottles to inflate the raft?

- A. The floor will automatically inflate.
- B. The painter will detach from the raft.
- C. If upside down, the craft will right itself.
- D. The sea anchor should be deployed as soon you are away from the vessel.

Correct answer: D

**39.** Inflatable liferafts are less maneuverable than lifeboats due to their \_\_\_\_\_.

- A. shallow draft
- B. shape
- C. large sail area
- D. All of the above

Correct answer: D

- 40.** You are on a ship that has broken down and are preparing to be taken in tow. You will use your anchor cable as part of the towline. Which statement is TRUE?
- A. The anchor cable should be led out through a chock, if possible, to avoid a sharp nip at the hawsepipe lip.
  - B. The anchor cable should be veered enough to allow the towline connection to be just forward of your bow.
  - C. The strain of the tow is taken by the riding pawl, chain stopper, and anchor windlass brake.
  - D. The anchor cable should be veered enough to allow the towline connection to be immediately astern of the towing vessel.

Correct answer: C

- 41.** What is used as an indicator of initial stability?
- A. GZ
  - B. KM
  - C. KG
  - D. GM

Correct answer: D

- 42.** When should the control of flooding of your vessel be addressed?
- A. Following restoration of vital services
  - B. Only if a threat exists
  - C. Following control of fire
  - D. First

Correct answer: C

- 43.** What does the air spaces in the floor of an inflatable liferaft provide protection against?
- A. Asphyxiation from CO<sub>2</sub>
  - B. Rocks when landing
  - C. Cold water temperatures
  - D. Loss of air in the sides of the raft

Correct answer: C

- 44.** You are on watch and receive word that a person has fallen overboard from the starboard side. What should your first action be?
- A. Put the wheel hard right
  - B. Put the engines full astern
  - C. Notify the Master
  - D. Sound the man overboard alarm

Correct answer: A

- 45.** You are trying to rescue survivors from a wrecked vessel on fire. How should you make your approach?
- A. To leeward of the wrecked vessel
  - B. To windward of the wrecked vessel
  - C. At a speed of at most one-half that of the wrecked vessel
  - D. At a speed of at least that of the wrecked vessel

Correct answer: B

**46.** Which statement is TRUE to safely enter a compartment where CO<sub>2</sub> has been released from a fixed extinguishing system?

- A. Wear a self-contained breathing apparatus
- B. Test the air with an Orsat apparatus
- C. Wear a canister type gas mask
- D. Test the air with a pure air indicator

Correct answer: A

**47.** Which portable fire extinguisher should be used on a class C fire on board a vessel?

- A. Water (stored pressure)
- B. Carbon dioxide
- C. Carbon tetrachloride
- D. Foam

Correct answer: B

**48.** Which of the following aspects of a flooded space will most adversely affect transverse stability if it is subject to free communication?

- A. On the centerline
- B. Off-center
- C. Open to the sea above and below the waterline
- D. Completely flooded

Correct answer: B

**49.** The spread of fire is NOT prevented by \_\_\_\_\_.

- A. cooling surfaces adjacent to the fire
- B. removing combustibles from the endangered area
- C. shutting off the oxygen supply
- D. removing smoke and toxic gases by ensuring adequate ventilation

Correct answer: D

**50.** You are the first vessel to arrive at the scene of a distress. Due to the volume of traffic on the radio, you are unable to communicate with the vessel in distress. Which action should you take?

- A. Broadcast "Seelonce Mayday"
- B. Switch to flag hoists
- C. Broadcast "Charlie Quebec-Mayday-Quiet"
- D. Key the microphone three times in quick succession

Correct answer: A

- 51.** If an airplane circles a vessel 3 times, crosses the vessel's course close ahead while rocking the wings, and heads off in a certain direction, what does this indicate?
- A. The plane is in distress and will have to ditch.
  - B. The plane is going to drop a package and wishes the vessel to recover it.
  - C. Someone is in distress in that direction and the vessel should follow and assist.
  - D. There is danger ahead and the best course is indicated by the direction of the aircraft.

Correct answer: C

- 52.** Large volumes of carbon dioxide are safe and effective for fighting fires in enclosed spaces, such as in a pumphoom, provided that the \_\_\_\_\_.
- A. persons in the space wear gas masks
  - B. persons in the space wear damp cloths over their mouths and nostrils
  - C. ventilation system is secured and all persons leave the space
  - D. ventilation system is kept operating

Correct answer: C

- 53.** At all angles of inclination, which is the true measure of a vessel's stability?
- A. Inclining moment
  - B. Righting moment
  - C. Metacentric height
  - D. Displacement

Correct answer: B

- 54.** "Limber" is a term associated with which item?
- A. Drainage
  - B. Emergency gear
  - C. Deck cargo storage
  - D. Securing gear

Correct answer: A

- 55.** What is the function of wearing rings found on some centrifugal pumps?
- A. Isolate the outlet side from the inlet side
  - B. Seal pump shaft against entry of air
  - C. Absorb erosion of high-velocity discharge stream
  - D. Dampen the turbulent discharge flow

Correct answer: A

- 56.** Why are diesel engines considered safer than gasoline engines?
- A. They operate at a lower speed
  - B. They are more heavily built
  - C. They can be easily reversed
  - D. The fuel used is less volatile

Correct answer: D

**57.** When evacuating a seaman by helicopter lift, which course should the ship take?

- A. A course that will have the hoist area in the lee of the superstructure.
- B. With the wind dead ahead because the helicopter is more maneuverable when going into the wind.
- C. A course that will keep a free flow of air, clear of smoke, over the hoist area.
- D. Downwind so that the apparent wind is close to nil.

Correct answer: C

**58.** What do the air spaces in the floor of an inflatable liferaft provide protection against?

- A. Asphyxiation from CO<sub>2</sub>
- B. Cold water temperatures
- C. Loss of air in the sides of the raft
- D. Rough seas

Correct answer: B

**59.** According to the Lifesaving regulations in Subchapter W, fire and abandon ship drills must be held within 24 hours of leaving port if the percentage of the crew that has not participated in drills aboard that particular vessel in the prior month exceeds which percentage?

- A. 5%
- B. 10%
- C. 25%
- D. 40%

Correct answer: C

**60.** According to the SOLAS regulations, lifeboat falls must be renewed at intervals of how many years?

- A. 2.5
- B. 3
- C. 4
- D. 5

Correct answer: D

**61.** Which is TRUE of the lifeline of a life float or buoyant apparatus?

- A. Shall have a seine float in each bight unless the line is an inherently buoyant material
- B. The line shall be at least 3/8-inch diameter and properly secured around the sides and ends of the device
- C. The lifeline shall be festooned in bights not longer than three feet long
- D. All of the above

Correct answer: D

**62.** When launching an open lifeboat by falls, which is TRUE concerning the boathooks?

- A. They must be secured amidships where they will not hinder the personnel
- B. They must be used for picking up survivors in the water
- C. They must be kept free to be used for fending off
- D. They must be secured forward and aft where readily available

Correct answer: C

**63.** What is the SAFEST action to take with an accumulations of oily rags?

- A. The rags should be stored in a locker out of direct sunlight
- B. The rags should be kept in non-metal containers
- C. The rags should be discarded as soon as possible
- D. The rags should be cleaned thoroughly for reuse

Correct answer: C

**64.** If the OCMI has NOT granted an extension, how often are free-fall lifeboats required to be lowered into the water and launched with the assigned crew?

- A. 3 months
- B. 6 months
- C. year
- D. 2 years

Correct answer: B

**65.** The lever shown in illustration D013SA below is operated when a lifeboat is in which of the following positions?

- A. When waterborne
- B. While at the embarkation deck
- C. As it is being lowered to sea level
- D. In the secured position in the davit

Correct answer: A

**66.** A fire starts on your vessel while refueling. Which action should you take FIRST?

- A. Sound the general alarm
- B. Attempt to extinguish the fire
- C. Determine the source of the fire
- D. Stop the ventilation

Correct answer: A

**67.** A galley grease fire on the stove may be extinguished using \_\_\_\_\_.

- A. water
- B. the range hood extinguishing system
- C. fire dampers
- D. foam

Correct answer: B

**68.** Which term is given to the difference between the starboard and port drafts caused by shifting a weight transversely in the vessel?

- A. Heel
- B. Flotation
- C. List
- D. Trim

Correct answer: C

- 69.** How does the rotation of the steering wheel on the navigation bridge initiate oil pressure being applied to the steering gear rams?
- A. By varying the angle of a tilting box or eccentricity of a floating ring
  - B. It is moving the automatic differential valve
  - C. By regulating the oil flow with the six-way valve
  - D. It is moving the follow up indicator which regulates the six-way valve

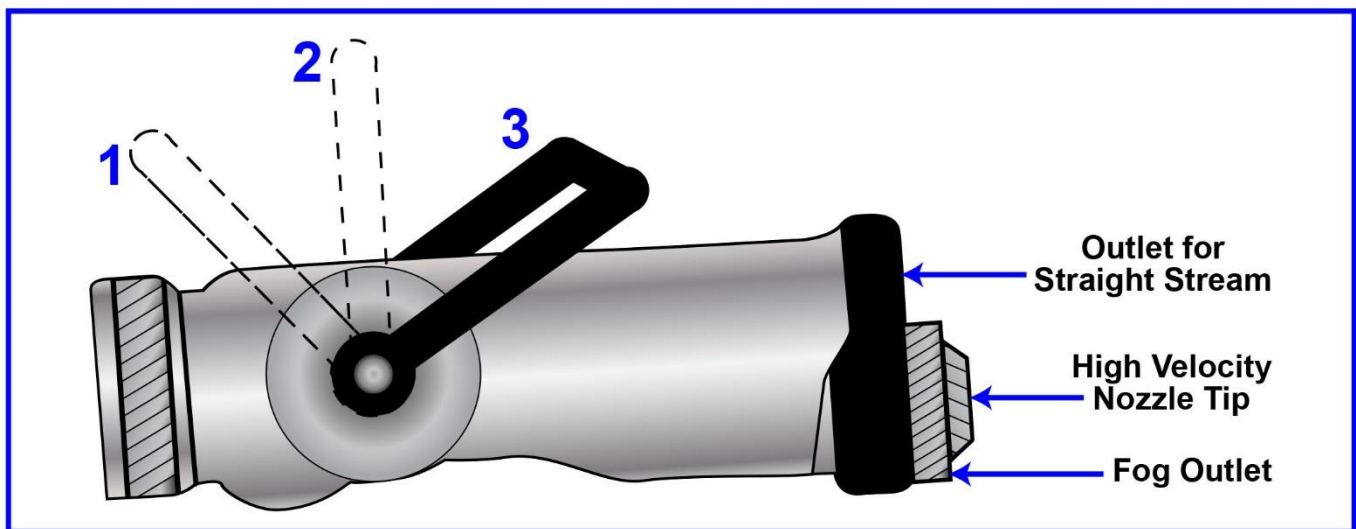
Correct answer: A

- 70.** Why is the height of a VHF radio antenna more important than the power output wattage of the radio?
- A. Salt water is a poor conductor of sound
  - B. The air is more dense the higher you go
  - C. Sea water absorbs the radiated energy
  - D. VHF communications are basically "line of sight"

Correct answer: D



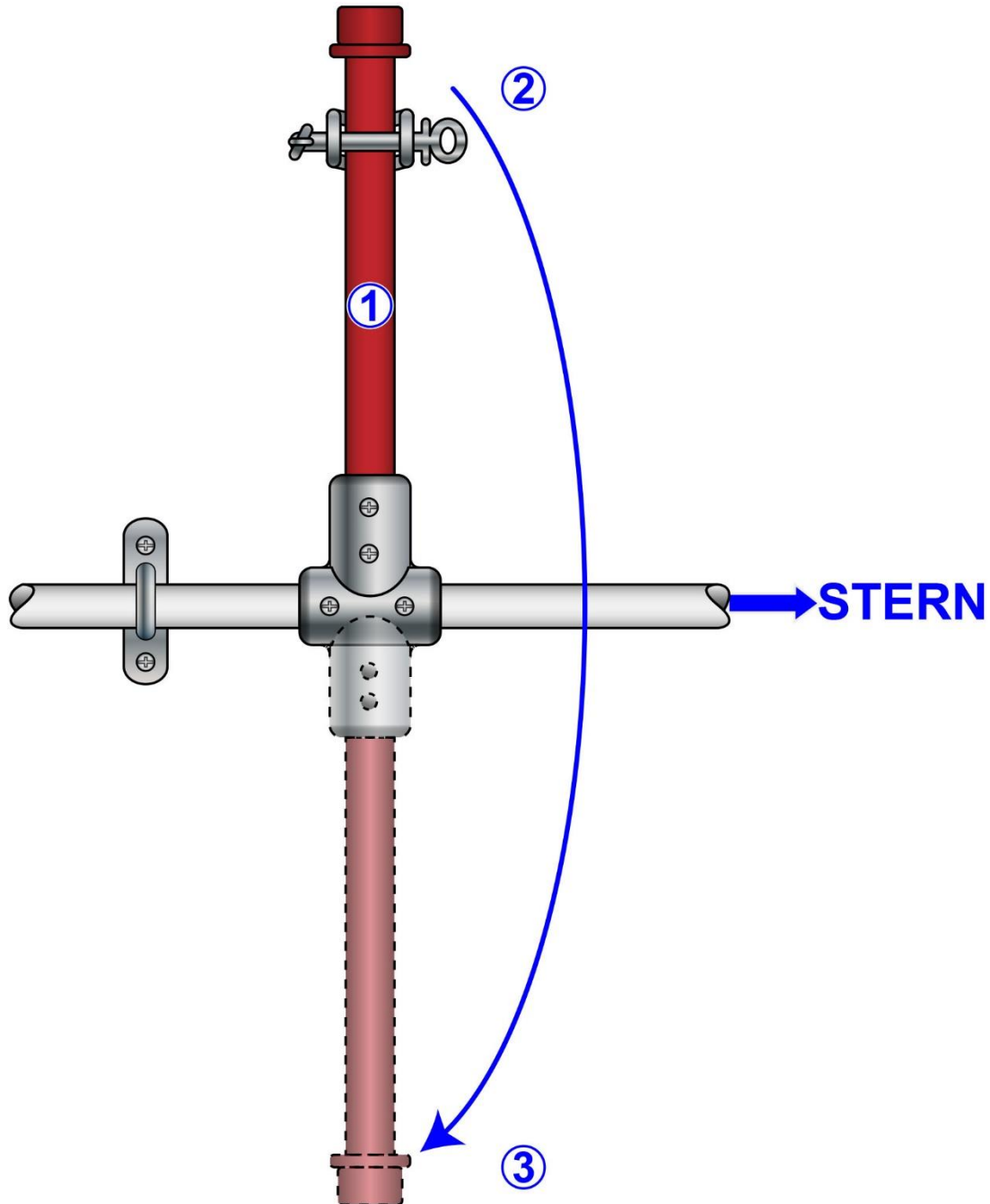
**D004SA**



Adapted for testing purposes only from Fire Fighting Manual for Tank Vessels  
United States Coast Guard CG-329  
Further reproduction prohibited without permission



**D013SA**



Adapted for testing purposes only from Water Survival Manual  
Copyright © 1991 by Seafarers Harry Lundeberg School of Seamanship  
Further reproduction prohibited without permission